

LOOK-AHEAD PREDICATE GENERATION FOR JOIN COSTING AND OPTIMIZATION

Abstract of the Disclosure

A relational database system analyzes each potential join in a query, to determine whether a relation involved in the join is subject to a selection criterion, and evaluate whether that selection criterion or the join per se effects a join reduction. The computational expense of generating a look-ahead predicate comprising the tuples of the second relation matching any applicable selection criterion, is compared to the computational savings that result from the join reduction. The most beneficial look-ahead predicate among all potential joins of relations in the query is identified through iterative analysis of all possible joins. Thereafter, membership in the look-ahead predicate is added as a selection criterion on the first relation, and further iterative analysis is performed of all possible joins of the remaining relations and the look-ahead predicate, to iteratively identify additional joins in the query that benefit from the formation of the look-ahead predicate, and potentially form further look-ahead predicates.